
कॉस्मेटिक उद्योग के
लिए तरल पैराफीन — विशिष्टि
(दूसरा पुनरीक्षण)

Liquid Paraffin for
Cosmetic Industry — Specification
(Second Revision)

ICS 71.100.70

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FOREWORD

This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards after the draft finalized by the Cosmetics Sectional Committee had been approved by the Petroleum, Coal and Related Products Division Council.

This standard was originally published in 1974 and first revised in 2017. In the first revision, methods of test for determination of arsenic and heavy metals were upgraded. Further, the Committee agreed for usage of viscosity instruments like Brookfield or Saybolt viscometer for determination of viscosity of mineral oil in addition to kinematic viscosity test method [IS 1448 (Part 25)] prescribed in the standard.

In this revision, the Committee has decided to incorporate a new type of liquid paraffin, namely Gas to Liquid (GtL) Oil which is produced from a gas feedstock using Fischer Tropsch process. Accordingly, to include GtL Oil in scope of the standard, the title of this standard has also been changed from 'Mineral oil for cosmetic industry — Specification' to 'Liquid paraffin for cosmetic industry — Specification'.

The composition of the Committee responsible for formulation of this standard is given at Annex H.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated expressing the result of a test or analysis shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

LIQUID PARAFFIN FOR COSMETIC INDUSTRY — SPECIFICATION

(Second Revision)

1 SCOPE

This standard prescribes requirements and methods of sampling and test for liquid paraffin for cosmetic industry.

2 REFERENCES

The standards given below contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subjected to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards given below:

<i>IS No.</i>	<i>Title</i>
1447 (Part 1) : 2000	Petroleum and its products — Methods of sampling: Part 1 Manual sampling (<i>first revision</i>)
1448	Methods of test for petroleum and its products:
(Part 4) : 1984	Petroleum products — Determination of ash (<i>third revision</i>)
(Part 10/Sec 1) : 2012	Cloud point and pour point, Section 1 Determination of cloud point (<i>second revision</i>)
(Part 13) : 1960	Colour by Lovibond tintometer
(Part 14) : 2019	Colour by Saybolt chromometer
(Part 25) : 1976	Determination of kinematic and dynamic viscosity (<i>second revision</i>)
(P : 32) : 2019/ ISO 3838 : 2004	Crude petroleum and liquid or solid petroleum products — Determination of density or relative density — Capillary stoppered pyknometer and graduated bicapillary pyknometer methods (<i>third revision</i>)

IS No.

Title

(Part 55/Sec 1) : 2004	Determination of Saponification value of petroleum products (<i>first revision</i>)
2088 : 1983	Methods for determination of arsenic (<i>second revision</i>)

3 TYPES

The liquid paraffin shall be classified into following two types:

- a) *Type 1* — Mineral oil. It shall be sub-classified into light, medium, and heavy mineral oil.
- b) *Type 2* — Gas to liquid (GtL) oil.

4 REQUIREMENTS

4.1 Description — The material shall consist of refined liquid paraffin, free from sediment, water, foreign matter and any visible impurities. It shall be clear, tasteless, and free from fluorescence. The material shall be insoluble in water and alcohol and soluble in ether and chloroform.

4.2 Colour — The colour of liquid paraffin shall not be inferior than $1.2Y + 0.3R$ Lovibond units when measured in 18 inch cell according to the method prescribed in IS 1448 (Part 13) or + 25 Saybolt units according to the method prescribed in IS 1448 (Part 14).

4.3 Odour — The material shall be odourless at room temperature. When the liquid paraffin is heated at 95 to 98 °C for 30 min in a water bath, it shall not give off objectionable odour.

4.4 The material shall also comply with the requirements given in Table 1 when tested as prescribed in col 5 and 6 of Table 1.

Table 1 Requirements for Liquid Paraffin for Cosmetic Industry
(Clause 4.4)

Sl No.	Characteristic	Requirement		Method of Test, Ref to	
		Type 1 (Mineral Oil)	Type 2 (GtL Oil)	Annex	'Part' of IS 1448
(1)	(2)	(3)	(4)	(5)	(6)
i)	Cloud point, °C, <i>Max</i>	5.0	5.0	—	Part 10/Sec 1
ii)	Viscosity ¹⁾ at 37.8 °C, centistokes	Light — 8 to 30 Medium — 31 to 63 Heavy — ≥ 64	3 to 40	—	Part 25
iii)	Relative density at 25 °C/25 °C	0.815 to 0.910	0.780 to 0.910	—	Part 32
iv)	Free acid and alkali	To pass the test	To pass the test	A	—
v)	Saponification value	Nil	Nil	—	Part 55/Sec 1
vi)	Sulphur and sulphides	To pass the test	To pass the test	B	—
vii)	Carbonizable substances	To pass the test	To pass the test	C	—
viii)	Ash (using 10 g of sample), percent by mass, <i>Max</i>	0.01	0.01	—	Part 4
ix)	Arsenic (as As ₂ O ₃), parts per million, <i>Max</i>	2.0	2.0	D	—
x)	Heavy metals as lead (Pb), parts per million, <i>Max</i>	20	20	E	—
xi)	Ultra violet absorption test, extinction, <i>Max</i>	0.1	0.1	F	—
xii)	Stability test	To pass the test	To pass the test	G	—

¹⁾ For any specific value within the range, it shall be agreed to between the purchaser and the supplier.

5 PACKING AND MARKING

5.1 Packing

The material shall be packed in suitable containers as agreed to between the buyer and the seller.

5.2 Marking

5.2.1 The containers shall be legibly marked with the following information:

- Name and type of material;
- Manufacturer's name and/or his recognized trade-mark, if any;
- Net volume of the material;
- Colour of the material in Lovibond or Saybolt units;
- Certificate that the material passes the UV absorption test;
- Batch or lot number, in code or otherwise; and
- Month and year of manufacturing/packing.

5.2.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity

assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.

6 SAMPLING

6.1 Representative samples of the material shall be drawn as prescribed in IS 1447 (Part 1).

6.2 Tests for all the characteristics given in 4 shall be carried out on the composite sample as per methods referred under 4.2, 4.3 and col 5 and 6 of Table 1.

6.3 The material shall be taken to have conformed to this specification if the composite sample passes all the tests.

7 QUALITY OF REAGENTS

Unless specified otherwise, pure chemicals and distilled water [see IS 1070 : 1992 'Reagent grade water (third revision)'] shall be employed in tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

ANNEX A

[Table 1, Sl No. (iv)]

DETERMINATION OF FREE ACID AND ALKALI

A-1 PROCEDURE

A-1.1 Shake 20 g of the sample with an equal amount of hot distilled water. Test the aqueous portion with blue litmus and red litmus.

A-1.2 The sample shall be taken to have passed the test if neither blue litmus nor red litmus change colour.

ANNEX B

[Table 1, Sl No. (vi)]

DETERMINATION OF SULPHUR AND SULPHIDES

B-1 REAGENT

B-1.1 Copper Strips — 1 cm in width and freshly polished.

a strip of copper in the sample so that it is partially immersed in it and allow to remain for 10 min.

B-2 PROCEDURE

B-2.1 Place in a beaker 100 g of the sample and keep on a water-bath at a temperature of 95 °C. Then place

B-2.2 The sample shall be taken to have passed the test if the copper strip used in the test shows no tarnishing when compared with another freshly polished copper strip.

ANNEX C

[Table 1, Sl No. (vii)]

DETERMINATION OF CARBONIZABLE SUBSTANCES

C-1 APPARATUS

C-1.1 Test Tubes — As shown in Fig. 1, of heat-resistant glass fitted with a well-ground glass stopper, the stopper and the tube bearing identical and indestructible numbers. The tube shall be (140 ± 3) mm in length and (14 ± 1) mm in outside diameter, and shall be calibrated at (5 ± 0.2) ml and (10 ± 0.2) ml liquid levels. The capacity of the tube with stopper inserted shall be (16 ± 1.0) ml. A rolled edge may be provided for suspending the tube on the cover of the water bath.

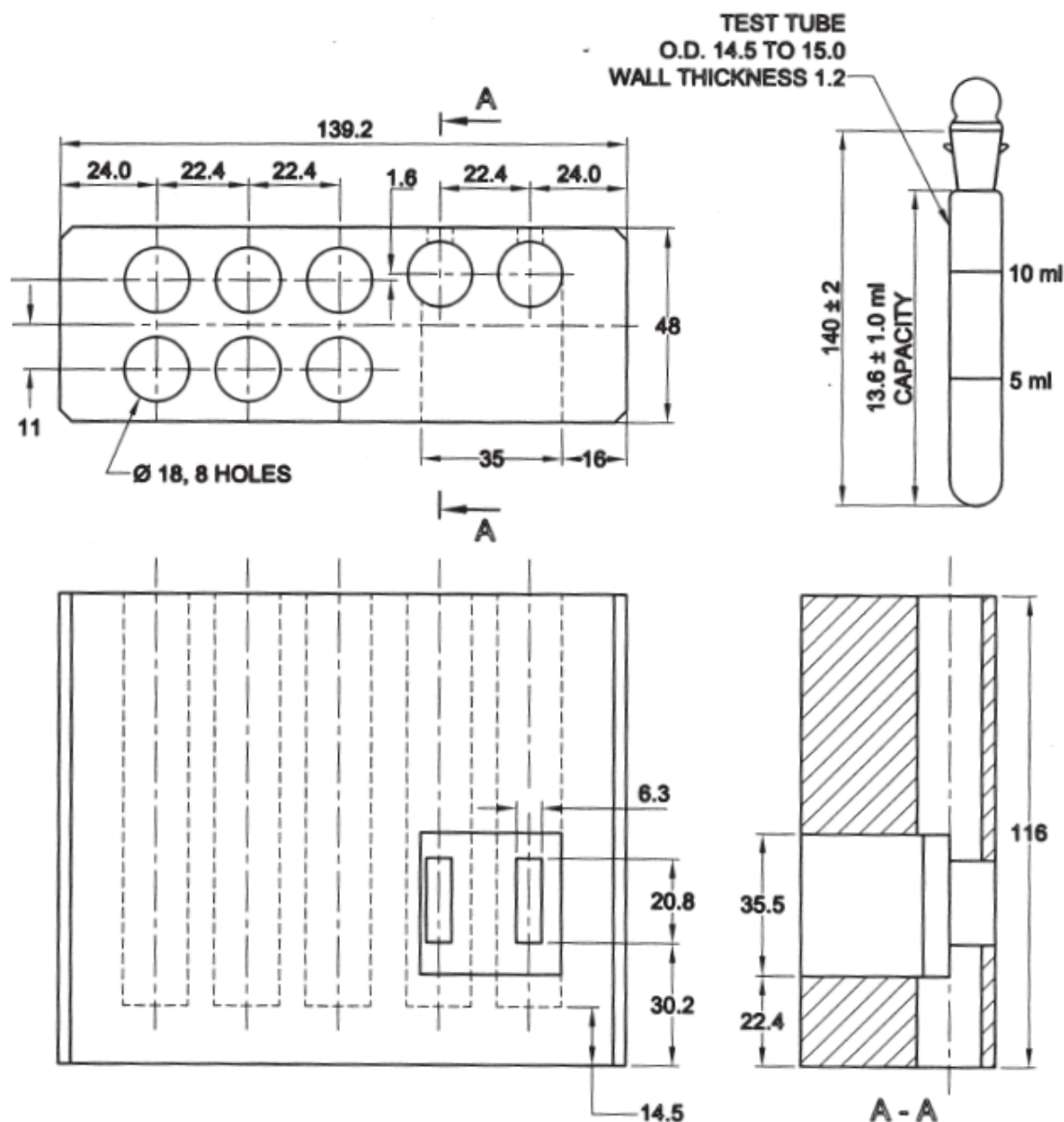
C-1.2 Water-Bath — A water-bath suitable for immersing the test tube above the 10 ml line and equipped to maintain a temperature of (100 ± 0.5) °C. The bath shall be provided with a cover of any suitable material with holes approximately 16 mm in diameter through which the test tubes may be suspended.

C-1.3 Colour Comparator — A colour comparator, of suitable type for observing the colour of the acid layer in comparison with the reference standard colour solution. The size and shape of the comparator are optional but the size and shape of the apertures shall conform to the dimensions prescribed in Fig. 1.

C-2 REAGENTS

C-2.1 Concentrated Sulphuric Acid — Nitrogen-free, which is tested as follows:

Dilute a small amount of the acid with an equal volume of water and superimpose 10 ml of the cooled liquid upon diphenylamine solution (1g of diphenylamine in 100 ml of concentrated sulphuric acid). Blue colour should not appear at the zone of contact within 1 h.



All dimensions in millimetres

FIG. 1 COLOUR COMPARATOR TEST FOR CARBONIZABLE SUBSTANCES

C-2.2 Cobaltous Chloride Solution — 0.5N. Dissolve 65 g of cobaltous chloride ($\text{CoCl}_2 \cdot 6\text{H}_2\text{O}$) in dilute hydrochloric acid (1:39) to make 1 000 ml of solution. Transfer 5 ml of this solution to a flask; add 16 ml of sodium hydroxide solution (1:5) and 5 ml of hydrogen peroxide. Boil for 10 minutes, cool and add 2 g of potassium iodide and 20 ml of sulphuric acid (1:4). When the precipitate has dissolved, titrate the liberated iodine with 0.1N sodium thiosulphate solution using starch as indicator. Each millilitre of sodium thiosulphate solution consumed is equivalent to 0.023799 g of $\text{CoCl}_2 \cdot 6\text{H}_2\text{O}$. Adjust the final volume

of cobalt chloride solution by the addition of dilute hydrochloric acid (1:39) so that 1 ml contains 59.5 mg of $\text{CoCl}_2 \cdot 6\text{H}_2\text{O}$.

C-2.3 Ferric Chloride Solution — 0.5N. Dissolve 55 g of ferric chloride ($\text{FeCl}_3 \cdot 6\text{H}_2\text{O}$) in diluted hydrochloric acid (1:39) to make 1 000 ml of solution. Transfer 10 ml of the solution to a flask, add 5 ml of concentrated hydrochloric acid, 25 ml of water and about 3 g of potassium iodide. Stopper and allow the mixture to stand for 5 minutes. Dilute the mixture with 50 ml of water and titrate the liberated iodine with 0.1 sodium thiosulphate solution using starch solution

as indicator. Each millilitre of 0.1 N thiosulphate solution is equivalent to 0.02703 g of $\text{FeCl}_3 \cdot 6\text{H}_2\text{O}$. Adjust the final volume of ferric chloride solution by addition of dilute hydrochloric acid (1 : 39) so that 1 ml contains 45.0 mg of $\text{FeCl}_3 \cdot 6\text{H}_2\text{O}$.

C-2.4 Cupric Sulphate Solution — 0.5N. Dissolve 65 g of $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ in dilute hydrochloric acid (1 : 39) to make 1000 ml of solution. Transfer 10 ml of this solution to a flask, add 50 ml of water, 4 ml of acetic acid, and 3 g of potassium iodide. Allow the mixture to stand for 5 min, then titrate the liberated iodine with 0.1N thiosulphate solution using starch solution as indicator. Each millilitre of 0.1 N thiosulphate solution is equivalent to 0.02497 g of $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$. Adjust the final volume of copper sulphate solution by the addition of diluted hydrochloric acid (1 : 39) so that 1 ml contain 62.4 mg $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$.

C-2.5 Reference Colorimetric Solution — Prepare a reference standard pale amber solution for colour comparison by mixing together 1.5 parts of cobalt chloride solution, 3.0 parts of the ferric chloride solution and 0.5 parts of the copper sulphate solution. Measure 5 ml of this mixture into a test tube as specified in C-1.1. This pale amber reference standard shall then be overlaid with 5 ml of liquid paraffin.

C-3 PROCEDURE

C-3.1 Clean a test tube with a chromic acid cleaning solution, rinse with tap water followed by distilled water, and dry in an oven at 105 °C for 1 h.

C-3.2 Fill the test tube to the 5 ml mark with sulphuric acid $\{(94.7 \pm 0.2) \text{ percent}\}$. Then add the sample to be

tested to the 10 ml mark, insert the stopper loosely, and place the test tube in position in the water-bath at $(100 \pm 0.5) ^\circ\text{C}$.

C-3.3 After the test tube has been in the water-bath for 30 s, loosen the stopper sufficiently to release any pressure and reinsert, remove the test tube from the bath quickly, hold with a finger over the stopper, and give three vigorous, vertical shakes over an amplitude of about 12 cm, shaking the test tube quickly and at a rate corresponding to 5 shakes per second. Repeat every 30 s. Do not keep the test tube out of the bath longer than 3 s for each shaking period.

C-3.4 At the end of 10 min from the time the test tube was first placed in the bath, remove the test tube and allow to stand at room temperature for not less than 10 min nor more than 30 minutes. Note any discolouration of the oil layer. Place the test tube in the colour comparator and compare the acid layer with 5 ml of the standard colorimetric solution and 5 ml of the sample liquid paraffin in the test tube that has been shaken vigorously for 10 s and allowed to stand just long enough for the contents to separate into two layers.

C-3.5 The liquid paraffin shall be reported as passing the test only when the oil layer shows no change in colour and when the acid layer is not darker than the reference standard colorimetric solution.

NOTE — A bluish haze in the oil layer should not be interpreted as a change in colour.

C-3.5.1 If the oil layer is discoloured or if the acid layer is darker than the reference standard colorimetric solution, the liquid paraffin shall be reported as not passing the test.

ANNEX D

[Table 1, Sl No. (ix)]

DETERMINATION OF ARSENIC

D-1 REAGENTS

D-1.1 Concentrated Sulphuric Acid

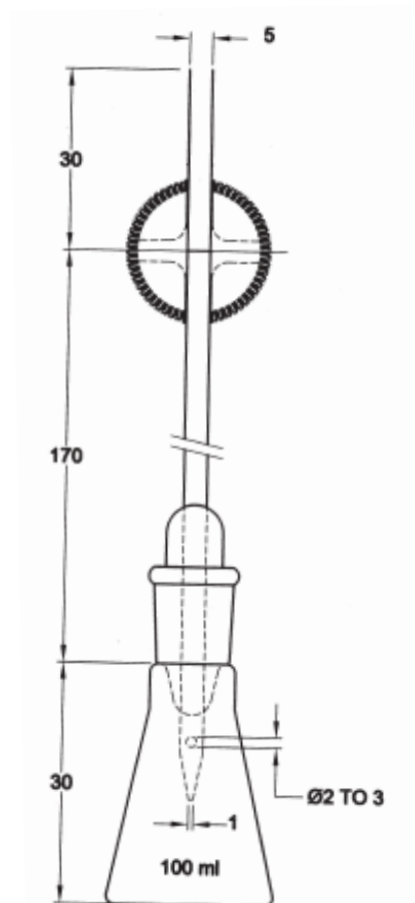
D-1.2 Concentrated Nitric Acid

D-1.3 Lead Acetate Cotton — Immerse absorbent cotton in a mixture of 10 volumes of lead acetate solution and 1 volume of 2 M acetic acid. Drain off the liquid by placing it on several layers of filter paper without squeezing the cotton. Allow to dry at room temperature. Store in tightly-closed containers.

D-1.4 1M Potassium Iodide — Dissolve 166.00 g of Potassium iodide in water to make 1 000 ml solutions.

D-1.5 Zinc AsT — Granulated zinc which complies with the following additional test:

To 10 g, add 15 ml of stannous chloride solution AsT and 5 ml of 0.1M Potassium iodide. Use the apparatus as in Fig. 2, but continue the action for 1 h; no visible stain is produced on the mercuric chloride paper. Repeat the test with the addition of 0.1 ml of arsenic standard solution (10 ppm); a faint but distinct stain is produced.



All dimensions in millimetres

FIG. 2 APPARATUS FOR TEST FOR ARGENIC

D-1.6 Mercuric Chloride Paper — Smooth white filter paper, not less than 25 mm in width, soaked in a saturated solution of mercuric chloride, pressed to remove superfluous solution and dried at about 60 °C in the dark. The grade of filter paper is such that the weight is between 65 and 120 g/m²; the thickness in mm of 400 papers is approximately equal, numerically, to the weight in g/m². Store in a stoppered bottle in the dark. The paper which has been exposed to sunlight or to the vapour of ammonia affords a lighter stain or no stain at all when employed in the limit test for arsenic.

D-1.7 Stannous Chloride Solution AsT — Prepared from stannous chloride solution (dissolve 330 g of stannous chloride in 100 ml of hydrochloric acid and add sufficient water to produce 1000 ml) by adding an equal volume of hydrochloric acid, boiling down to the

original volume, and filtering through a fine-grain filter paper.

D-2 PROCEDURE

D-2.1 Preparation of Sample — Weigh 2.000 g of the sample in a Kjeldahl flask of 500 ml capacity. Add 15 ml of concentrated sulphuric acid followed by 4 ml of concentrated nitric acid. Heat cautiously. Add drop by drop more nitric acid, if required, from a pipette to speed up the oxidation of the sample. The total amount of nitric acid shall be noted for use in the control test. When oxidation is complete, the solution is clear and faint yellow; at that stage, add 20 ml of water and again boil to fuming. Ensure removal of all nitric acid. Make up the volume to 20 ml.

D-2.2 Carry out the test for arsenic with the solution prepared in D-2.1.

D-2.3 The apparatus (*see* Fig. 2) consists of a 100 ml bottle or conical flask closed with a rubber or ground-glass stopper through which passes a glass tube (about 20 cm × 5 mm). The lower part of the tube is drawn to an internal diameter of 1.0 mm and 15 mm from its tip is a lateral orifice 2 to 3 mm in diameter. When the tube is in position in the stopper the lateral orifice should be at least 3 mm below the lower surface of the stopper. The upper end of the tube has a perfectly flat surface at right angles to the axis of the tube. A second glass tube of the same internal diameter and 30 mm long, with a similar flat surface, is placed in contact with the first and is held in position by two spiral springs or clips. Into the lower tube insert 50 or 60 mg of lead acetate cotton, loosely packed, or a small plug of cotton and a rolled piece of lead acetate paper weighing 50 to 60 mg. Between the flat surfaces of the tubes place a disc or a small square of mercuric chloride paper large enough to cover the orifice of the tube. (15 mm × 15 mm).

D-2.4 Method

Introduce the test solution prepared as given in D-2.1 into the bottle or conical flask; add 5 ml of 1M potassium iodide and 10 g of zinc AsT. Immediately assemble the apparatus and immerse the flask in a water-bath at a temperature such that a uniform evolution of gas is maintained. After 40 min any stain produced on the mercuric chloride paper is not more intense than that obtained by treating in the same manner 1.0 ml of arsenic standard solution (10 ppm) diluted to 50 ml with water and using 20 ml of the above solution.

ANNEX E

[Table 1, Sl No. (x)]

DETERMINATION OF HEAVY METALS

E-1 OUTLINE OF THE METHOD

The colour produced with hydrogen sulphide solution is matched against that obtained with standard lead solution.

E-2 APPARATUS

E-2.1 Nessler Cylinders — 50 ml capacity.

E-3 REAGENT

E-3.1 Dilute Hydrochloric Acid — Approximately 5 N.

E-3.2 Dilute Acetic Acid — Approximately 1 N.

E-3.3 Dilute Ammonium Hydroxide — Approximately 5 N.

E-3.4 Hydrogen Sulphide Solution — Standard.

E-3.5 Standard Lead Solution — Dissolve 1.600 g of lead nitrate in water and make up the solution to 1 000 ml. Pipette out 10 ml of the solution and dilute again to 1 000 ml with water. One ml of this solution contains 0.01 mg of lead (as Pb).

E-4 PROCEDURE

Weigh 2.000 g of material in a crucible and heat on a hot plate and then in a muffle furnace to ignite it at 600 °C to constant mass. Add 3 ml of dilute hydrochloric acid, warm (wait till no more dissolution occurs) and make up the volume to 100 ml. Filter the solution. Transfer 25 ml of the filtrate into a Nessler's cylinder. In the second Nessler's cylinder, add 2 ml of dilute acetic acid, 1.0 ml of standard lead solution and make up the volume with water to 25 ml.

Add 10 ml of hydrogen sulphide solution to each Nessler cylinder and make up the volume with water to 50 ml. Mix and allow to stand for 10 min. Compare the colour produced in the two Nessler's cylinders. Blank determinations without samples are recommended to avoid errors arising out of reagents.

E-5 RESULTS

The sample may be taken to have passed the test, if the colour developed in the sample solution is less than that of standard solution.

ANNEX F

[Table 1, Sl No. (xi)]

DETERMINATION OF ULTRA VIOLET ABSORPTION

F-0 GENERAL

The extent to which radiation is absorbed in passing through a layer of an absorbing substance is expressed in terms of the extinction, E . This purely optical quantity is defined by the expression:

$$E = \log_{10} (I_0/I)$$

where I_0 is the intensity of the radiation passing into the absorbing layer and I the intensity of the radiation passing out of it. For a solution of an absorbing solute contained in an absorption cell having flat parallel optical faces, results are evaluated by the expression:

$$E_{1 \text{ percent, } 1 \text{ cm}} = E/c \cdot l$$

Where c is the concentration of absorbing solute expressed as a percentage (m/v) and l the thickness of the absorbing layer in centimeter. Therefore, $E_{1 \text{ percent, } 1 \text{ cm}}$ is the extinction of a 1-cm layer of 1 percent

(m/v) solution of the absorbing solute, its value at a particular wavelength in a given solvent being a property of the solute.

F-1 PROCEDURE

F-1.1 In measuring the extinction of a solution at a given wavelength, the extinction of the solvent cell and its contents shall not exceed 0.4 per cm of path length, and shall in general be less than 0.2 per cm of path length, when measured with reference to air at the same wavelength. The solvent in the solvent cell shall be of the same batch as that used to prepare the solution and shall be free from fluorescence at the wavelength of measurement. Statements of concentration and thickness of the solution to be used in the determination of the light absorption apply to measurements made with photoelectric instruments. When such details

are not given or when measurements are made by a photographic or visual instruments, the concentration and thickness of solution shall be adjusted so that the measured extinction lies within the optimum working range of the apparatus.

F-1.2 For this test it is more convenient to use a recording instrument, a 1 cm layer of 2.0 percent *m/v* solution in trimethyl pentane in the wave length range of 240 to 280 nm. If these conditions are not appropriate for a particular instrument, the thickness should be varied and not the concentration.

F-1.3 When measuring the extinction of an absorption medium the spectral slit width shall be small compared with the half width of the absorption band, otherwise erroneously low extinctions will be measured. Particular care is needed in this respect and the instrumental slit width used should always be such that a further reduction does not result in an increased extinction reading.

ANNEX G

[Table 1, Sl No. (xii)]

DETERMINATION OF STABILITY

G-1 APPARATUS

G-1.1 Ultra Violet Lamp

G-2 PROCEDURE

Take 50 ml of the sample in a clean beaker, place under the ultra violet lamp and expose it for a total period of 6 h. Measure the colour of the sample, either in Lovibond units using 18 inch cell according to method

prescribed in IS 1448 (Part 13) or in Saybolt units according to method prescribed in IS1448 (Part 14).

G-2.1 The sample shall be taken to have passed the test if the colour of the sample is not darker than:

- a) $1.2Y + 0.3R$ Lovibond units,
- or
- b) + 25 Saybolt units.

ANNEX H*(Foreword)***COMMITTEE COMPOSITION**

Cosmetics Sectional Committee, PCD 19

<i>Organization</i>	<i>Representative(s)</i>
Drugs Controller General (INDIA), Delhi	DR V. G. SOMANI (<i>Chairman</i>)
All India Cosmetic Manufacturers Association, Mumbai	MS KAJAL ANAND DR VIRENDRA V. CHAVAN (<i>Alternate</i>)
Chemstar Limited, Mumbai	SHRI SUNIL JOSHI
Cavinkare Private Limited, Chennai	DR T. KUMAR DR GIREESH KUMAR (<i>Alternate I</i>) DR S. SANKAR KALIDAS (<i>Alternate II</i>)
Central Drugs Standard Control Organization (CDSCO), Delhi	DR S. P. SHANI
Central Drugs Testing Laboratory (CDTL), Chennai	MS C. VIJAYA LAKSHMI DR J. UMA MAHESWARI (<i>Alternate</i>)
Consumer Voice, New Delhi	SHRI H. WADHWA
CSIR Indian Institute of Toxicological Research, Lucknow	DR A. B. PANT DR R. S. RAY (<i>Alternate</i>)
Central Drugs Testing Laboratory (CDTL), Mumbai	DR RAMAN MOHAN SINGH SHRIMATI S. U. WARDE (<i>Alternate I</i>) SHRIMATI SUJATA S. KAISARE (<i>Alternate II</i>)
Colgate Palmolive (India) Limited, Mumbai	DR MANAS V. VYAS SHRIMATI SHRUTI HARDIKAR (<i>Alternate I</i>) SHRI PURUSHOTTAM JADHAV (<i>Alternate II</i>)
Consumer Guidance Society of India, Mumbai	DR SITARAM DIXIT DR M. S. KAMATH (<i>Alternate</i>)
Dabur India Limited, Sahibabad	DR PRASUN BANDYOPADHYAY DR S. K. LUTHRA (<i>Alternate I</i>) SHRI SHIVAJI RAI (<i>Alternate II</i>)
Directorate of Food and Drugs Administration, Goa	MS JYOTI J. SARDESSAI
Drugs Control Department, Delhi	SHRI A. K. NASA SHRI K. R. CHAWLA (<i>Alternate</i>)
Envisbe Solutions Pvt Limited, Mumbai	SHRI BENEDICT M. MASCARENHAS
Essential Oil Association of India (EOAI), Noida	SHRI AJAY K. JAIN
Food Safety and Drug Administration, Lucknow	DR ANITA BHATNAGAR JAIN SHRI DINESH KUMAR TIWARI (<i>Alternate</i>)
Food and Drugs Control Administration Gujarat, Gandhinagar	DR H. G. KOSHIA SHRI V. R. SHAH (<i>Alternate</i>)
Food and Drugs Administration Haryana, Panchkula	SHRI NARENDER KUMAR AHOOJA SHRI MANMOHAN TANEJA (<i>Alternate</i>)
Food and Drugs Administration Maharashtra, Mumbai	SHRI O. S. SADHWANI
Fragrance and Flavours Association of India, (FAFAI), Mumbai	SHRI HASMUKH PATEL

<i>Organization</i>	<i>Representative(s)</i>
Galaxy Surfactants Limited, Mumbai	SHRI R. K. SINGH SHRI SAGAR TRAILOKYA (<i>Alternate I</i>) SHRI PRAMOD SABAT TRAILOKYA (<i>Alternate II</i>)
Godrej Consumers Products Limited, Mumbai	MS RUPINDER KAUR RAWAT DR MANOJ GAUR (<i>Alternate</i>)
Hindustan Lever Limited (HUL), Mumbai	MS VRINDA RAJWADE
Hygienic Research Institute Private Limited, Mumbai	DR JAYASHREE ANAND SHRI MANOJ SARKAR (<i>Alternate</i>)
Indian Pharmacopoeia Commission (IPC), Ghaziabad	DR ANIL KR TEOTIA DR MANOJ KR PANDEY (<i>Alternate</i>)
ITC R & D Centre, Bengaluru	DR GURUBASAVARAJA KM DR JAMES BHASKAR (<i>Alternate I</i>) DR JOHN BOSCO STANISLAUS (<i>Alternate II</i>)
Indian Beauty and Hygiene Association (IBHA), Mumbai	MS MALATHI NARAYANAN
Johnson and Johnson Limited, Mumbai	DR DILIP TRIPATHI SHRI RAJNEESH KUMAR (<i>Alternate</i>)
Kelkar Education Trusts (KETS) Scientific Research Centre, Mumbai	DR S. S. BARVE
Loreal India Private Limited, Mumbai	MS VEENA BALGI MS RUPALI TURAKHIYA (<i>Alternate</i>)
Marico Limited, Mumbai	DR MITALI HEDGE DR SUDHAKAR MHASKAR (<i>Alternate I</i>) SHRI PRABODH S. HALDE (<i>Alternate II</i>)
Mikasa Cosmetics Limited, Ahmedabad	MS TRUPTI PATEL
Ministry of Micro, Small and Medium Enterprises (MSME), Delhi	DR ARUN KUMAR DR IZZATULLAH (<i>Alternate</i>)
Ministry of AYUSH, Delhi	DR D. C. KATOCH
Procter and Gamble, Mumbai	SHRI GIRISH PARHATE
PETA India, Mumbai	SHRI MANILAL VALLIYATE MS DIPTI M. KAPOOR
The Himalaya Drug Company, Bengaluru	DR SUNDARAM RAMACHANDRAN DR KRISHNAN SRIRAMAN (<i>Alternate</i>)
Voluntary Organization In Interest of Consumer Education (VOICE), Delhi	DR M. A.U. KHAN
Bureau of Indian Standards, Jammu	SHRIMATI NISHA BURA
BIS Directorate General	SHRIMATI NAGAMANI T., SCIENTIST 'E' AND HEAD (PCD) [REPRESENTING DIRECTOR GENERAL (<i>Ex-officio</i>)]

Member Secretary

SHRIMATI D. UMA
SCIENTIST 'D' (PCD), BIS

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Food and Drug Administration, Mumbai	SHRI K. B. SHENDE
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